Mobile Air Monitoring Program

Maricopa County
Air Quality Department

In addition, there are meteorological monitors which measure wind speed and direction, relative humidity, ambient temperature, barometric pressure and solar radiation. An added bonus to the van is a video surveillance system.

The air monitoring program includes a trailer that has continuous air pollutant monitors which measure criteria pollutants such as ozone, particulate matter [PM-10 and PM-2.5], carbon monoxide, nitrogen dioxide, sulfur dioxide and lead.

Training

All of the platforms and instruments of the Mobile Air Monitoring Program are highly complex. Air monitoring staff will go through several months of rigorous training before this program will begin monitoring and providing data. Staff will also need continued training in order to provide the most efficient data and service to the residents and citizens of Maricopa County.

For more information visit
www.maricopa.gov/AQ

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History

For over 50 years, Maricopa County has been monitoring the air quality throughout this region using a network of fixed air monitoring sites. These stationary sites monitor a variety of pollutants including: carbon monoxide, ozone, particulates, nitrogen dioxide, hydrocarbons, sulfur dioxide and metals.

Today, the Maricopa County Air Quality Department still operates a network of sites in 23 fixed locations throughout the Valley. In addition to these stationary sites, a new program has been created that will allow the monitoring of criteria pollutants and wide range of other air toxics by doing so on a mobile platform. This new section, the Mobile Air Monitoring Program, differs from the fixed air monitoring sites as it will assess the air quality in specific areas rather than providing representative samples throughout the county.

How the program will be used

Approved by the Maricopa County Board of Supervisors in November 2006, the Mobile Air Monitoring Program is fully developed with top-of-the-line equipment and will be used to perform: case studies, complaint investigations and stack testing.

Case Studies
This section of the Mobile Air Monitoring Program will participate in studies to determine the effectiveness of rules and regulations. In addition, it will aid in quantifying the need for new rules in Maricopa County.

Complaint Investigations
The Mobile Air Monitoring Program will investigate specific areas based on past and present air pollution complaint and concerns at the discretion of the air pollution control officer.

Stack Testing
The Mobile Air Monitoring Program is targeting to perform in 2010 spot testing on stack emissions to determine whether or not permitted sources are within compliance.

All of these activities require the use of a wide variety of instruments and equipment. Each instrument requires its own unique training and maintenance schedules. These schedules are but one part of a comprehensive quality assurance system that will be developed for the entire Mobile Air Monitoring Program which will follow all practical federal guidance and regulations.

Equipment

The Mobile Air Monitoring Program includes a fully equipped vehicle with some highly technical capabilities. The Gas Chromatograph/ Mass Spectrometer (GC/MS), for example, monitors air toxics, hydrocarbons and sulfur-containing compounds directly from the air or it can process samples taken over a wide area. The stack monitors measure the following pollutants from industrial stacks:

- Sulfur Dioxide
- Nitrogen Oxide
- Carbon Monoxide
- Carbon Dioxide
- Oxygen
- Volatile Organic Compounds